

ABSTRACT OF THE DISCLOSURE

A technique for providing an optical signal to a destination. In one embodiment, the technique is realized through the use of an environmentally hardened, modular switch and a fiber distribution methodology. The modular switch may include fiber access ports, power access ports, dual power supply modules, dual switch fabric modules, dual optical trunking modules, and multiple subscriber service modules that house subscriber service ports and serve a total of up to 96 end points. The dual optical trunking modules may act as an interface between an optical network and the dual switch fabrics, and provide redundancy and variable optical transmission distance between the modular switch and the optical network to which the modular switch is connected. The dual switch fabrics are used for switching and aggregating signals and providing redundancy. Each subscriber service module acts as an interface between one or more subscriber end points and the dual switch fabrics of the modular switch. The subscriber service modules may be coupled to one or both of the dual switch fabrics and a total of up to 96 subscriber end points. Subscriber end point connectivity may be achieved via subscriber service ports (housed within a subscriber service module), one or more of the fiber access ports, external fiber optic splice cabinet, fiber optic trunk cable, and one or more fiber breakout points (housed by pedestals). The subscriber end points may consist of one or more optical or electrical subscriber connection types.